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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/672,759

09/27/2003

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12/17/2007

EXAMINER

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ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

12/17/2007

PAPER

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte NEIL ALEX KORNEFF

Appeal 2007-4187
Application 10/672,759
Technology Center 1700

Decided: December 17, 2007

Before EDWARD C. KIMLIN, BRADLEY R. GARRIS, and
MICHAEL P. COLAIANNI, *Administrative Patent Judges*.

COLAIANNI, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

1 Appellant appeals under 35 U.S.C. § 134 the final rejection of claims 1-4 and 15-24. We have jurisdiction over the appeal pursuant to 35 U.S.C. § 6(b).

We AFFIRM.

Appellant claims a method of performing additional ejection sequences in an injection mold on demand comprising detecting the

presence of a molded article in the injection mold and either initiating the next molding cycle if no article is detected or activating an ejection sequence if an article is detected (claim 1).

Claim 1 is illustrative:

1. A method of performing additional ejection sequences in an injection mold on demand comprising the steps of:
 - a. Detecting the presence of a molded article, or portion thereof, in the injection mold
 - b. Initiating the next molding cycle if the said molded article, or portion thereof, is not detected in the said mold
 - c. Activating an ejection sequence if said molded article, or portion thereof, is detected in said mold [.]

The Examiner relies on the following prior art references as evidence of unpatentability:

Bangerter	4,603,329	Jul. 29, 1986
Lausenhammer	6,315,543 B1	Nov. 13, 2001
Buckley	6,427,755 B1	Aug. 6, 2002

The rejections as presented by the Examiner are as follows:

1. Claims 1-4, 15, 17-19, and 22 are rejected under 35 U.S.C. § 102(b) as being unpatentable over Bangerter.
2. Claims 1-4 are rejected under 35 U.S.C. § 102(b) as being unpatentable over Lausenhammer.
3. Claims 16, 20, 21, 23, and 24 are rejected under 35 U.S.C. § 103 as being unpatentable over Buckley in view of Lausenhammer or Bangerter.

Appellant only argues independent claim 1. Accordingly, dependent claims 2-4 and 15-24, which depend on claim 1, stand or fall with claim 1.

35 U.S.C. § 102 REJECTIONS OVER BANGERTER OR
LAUSENHAMMER

The Examiner construes claim 1 as reciting conditional claim features. Specifically, the Examiner construes claim 1 as performing step b or step c depending on the absence or presence of an article in the mold sensed in the detecting step, respectively (Ans. 7-8).

The Examiner finds that Bangerter or Lausenhammer discloses detecting whether a molded article is present and stopping the injection molding process if the molded article is detected, or continuing with the next molding process if no article is detected (Ans. 3-4). Therefore, the Examiner finds that Bangerter or Lausenhammer anticipates Appellant's claimed invention.

In the alternative, the Examiner finds that if Bangerter or Lausenhammer detects a molded article in the mold then the ejection sequence of step c would be "**immediately envisioned**" by one of ordinary skill in the art (i.e., inherent) from Bangerter's or Lausenhammer's disclosure that the mold must be free of parts prior to continuing the molding process (Ans. 8).

Appellant argues that Bangerter or Lausenhammer fails to disclose the claimed step c of "activating an ejection sequence if said molded article, or portion thereof, is detected in said mold" (Br. 4 and 5). Appellant argues that Bangerter or Lausenhammer simply stops the molding process if an article is detected in the mold, but does not activate an ejection sequence (Br. 4 and 5).

ISSUES

1. Whether Appellant's step c of "activating an ejection sequence" is properly construed as a conditional step in the claimed process.
2. Whether Bangerter or Lausenhammer anticipates Appellant's claimed invention.

Issue 1: Claim Construction

STATEMENT OF THE LAW

Claim construction is a question of law. *In re Roemer*, 258 F.3d 1303, 1306 (Fed. Cir. 2001). During examination, claim terms are given their broadest reasonable interpretation consistent with the Specification. *In re American Academy of Science Tech Center*, 367 F.3d 1359, 1364 (Fed. Cir. 2004). Unless applicant provides a definition for a claim term in their specification, the claim term will be given its plain meaning. *In re Thrift*, 298 F.3d 1357, 1364 (Fed. Cir. 2002).

FACTUAL FINDINGS

Claim 1

1. Step b of claim 1 recites "[i]nitiating the next molding cycle if the said molded article, or portion thereof, is not detected in the said mold" (Claim 1).
2. Step c of claim 1 recites "[a]ctivating an ejection sequence if said molded article, or portion thereof, is detected in said mold" (Claim 1).
3. Appellant discloses that "[w]hen the article-detection devices . . . detect a molded article, or portion of an article . . . , the article-detection controller . . . is alerted of the condition . . . [and] enables

the molding machine controller . . . to perform an additional ejection sequence on the mold ejector system” (Specification 4).

ANALYSIS

The dispositive claim term for construing the claim is the term “if.” Appellant has not provided definitions of any of the terms used in the claims. Accordingly, the claim terms are given their plain meaning. *Thrift*, 298 F.3d at 1364.

The claim term “if” is a conditional term. In other words, “if” indicates that Step b or Step c of claim 1 will not occur unless the condition following the word “if” is satisfied. Accordingly, when the conditional phrase of Step b is satisfied, Step c does not occur for that particular molding cycle. Similarly, when the conditional phrase of Step c is satisfied, Step b does not occur for that particular molding cycle.

This construction of claim 1 is supported by Appellant’s disclosure that states that “when” the article detection devices detect an article they signal to begin ejection sequences (Claim Construction FF 3). By using the word “when” Appellant indicates that the step does not occur until a particular condition is satisfied (i.e., an article is sensed).

Accordingly, we construe claim 1 as requiring Step a and either Step b or Step c to occur for the claim features to be met.

CONCLUSION OF LAW

Appellant’s claim 1 is properly construed as requiring Step a and either Step b or Step c to occur.

Issue 2: Anticipation of the Claims

STATEMENT OF THE LAW

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros., Inc. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987).

FACTUAL FINDINGS

The Bangerter Patent

1. Bangerter discloses a method of sensing the presence or absence of parts in an injection molding machine (Bangerter, col. 1, ll. 8-13; col. 2, ll. 34-36).
2. Bangerter discloses that if the sensing step indicates that no part is present in the mold (i.e., the ALL ON and ALL OFF signals are generated at their appropriate times), then the molding process is signalled to proceed to the next molding step (Bangerter, col. 3, ll. 67-68; col. 4, ll. 4-8).
3. Bangerter discloses that if the sensing step indicates that a part is present in the mold (i.e., the ALL ON and ALL OFF signals are not generated at the appropriate times), then the molding process is signalled to not proceed with its next step in the parts forming cycle (Bangerter, col. 3, ll. 67-68; col. 4, ll. 1-4).
4. Bangerter discloses that “it is imperative in order to prevent damage to the dies, molds or other similar tooling of the parts forming equipment that all newly formed parts be completely removed from

the molds or dies before the next cycle in the parts forming operation begins” (Bangerter, col. 1, ll. 27-32).

5. Bangerter inherently discloses activating an additional ejection sequence to remove an article left in the mold so that the next molding cycle may commence.

The Lausenhammer Patent

1. Lausenhammer discloses a method of detecting the presence of an article on a mold of an injection molding machine, and controlling the operation of the device on the basis of the detection (Lausenhammer, col. 1, ll. 12-15).
2. Lausenhammer discloses that the sensing step detects whether any molded parts or portions of molded parts remain on a mold plate and provides a stop signal to stop injection operations when it is determined that molded parts or portions of molded parts remain on the mold plate (Lausenhammer, col. 2, ll. 12-18).
3. Lausenhammer discloses that if the sensor does not detect any article or portion of an article, then the controller signals to begin the next molding cycle (Lausenhammer, col. 5, ll. 30-37).
4. Lausenhammer discloses that the mold may be damaged or the next molding may be defective if parts are left on the mold (Lausenhammer, col. 1, ll. 42-45).
5. Lausenhammer discloses that articles or portions of the articles may remain on the core pins of an injection mold due to failure of the injection system (Lausenhammer, col. 1, ll. 38-39).

6. Lausenhammer inherently discloses activating an ejection sequence to remove an article remaining in the mold so that the next molding cycle may commence.

ANALYSIS

We construed claim 1 as requiring Step a and either Step b or Step c to be performed.

Bangerter and Lausenhammer both disclose detecting the presence or absence of a molded article in the mold, and initiating the next molding cycle, if the molded article is absent from the mold (Bangerter FF 1 and 2; Lausenhammer FF 1 and 3).

Based on our claim construction, we find that Bangerter and Lausenhammer anticipate Appellant's claimed invention by disclosing performing Steps a and b of claim 1.

As the Examiner additionally noted, Steps a and c would also have been inherently performed by Bangerter and Lausenhammer. Specifically, as we found above, Lausenhammer and Bangerter would necessarily have to perform an additional ejection sequence to remove an article, or portion thereof, left in the mold, otherwise, the molding process would never be restarted. Accordingly, we find, as the Examiner found, that Bangerter and Lausenhammer also disclose performing Steps a and c.

CONCLUSION

Bangerter anticipates Appellant's claims 1-4, 15, 17-19, and 22.
Lausenhammer anticipates Appellant's claims 1-4.

35 U.S.C. § 103 REJECTION OVER BUCKLEY IN VIEW OF
BANGERTER OR LAUSENHAMMER

Appellant does not separately argue the § 103 rejection over Buckley in view of Bangerter or Lausenhammer. Rather, Appellant contends that Buckley does not cure the deficiencies of Bangerter or Lausenhammer with regard to claim 1. However, as we found above Bangerter and Lausenhammer anticipate Appellant's claim 1. Accordingly, there are no deficiencies of claim 1 for Buckley to cure.

Therefore, Appellant's arguments regarding the § 103 rejection over Buckley in view of Bangerter or Lausenhammer are unpersuasive for the same reasons noted above regarding the § 102 rejections of claim 1.

CONCLUSION OF LAW

For the above reasons, we conclude that claims 16, 20, 21, 23, and 24 are unpatentable under § 103 over Buckley in view of Bangerter or Lausenhammer.

DECISION

We AFFIRM the Examiner's § 102(b) rejection of claims 1-4, 15, 17-19, and 22 over Bangerter.

We AFFIRM the Examiner's § 102(b) rejection of claims 1-4 over Lausenhammer.

We AFFIRM the Examiner's § 103 rejection of claims 16, 20, 21, 23, and 24 over Buckley in view of Bangerter or Lausenhammer.

The Examiner's decision is affirmed.

Appeal 2007-4187
Application 10/672,759

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

tc

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